
STEAM
Recycled Crafts

Did You Know?

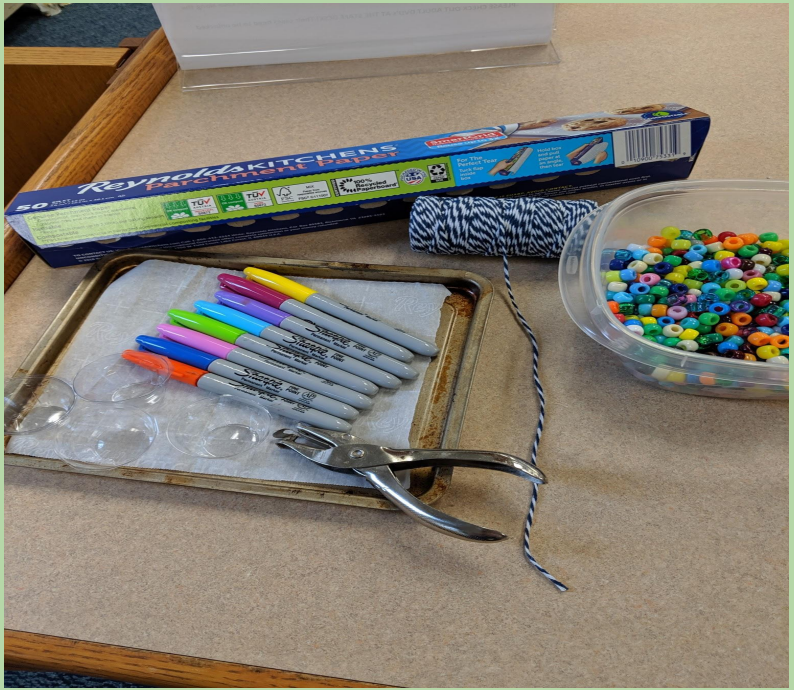
- Plastic pollution is now considered one of the largest environmental threats facing humans and animals globally
- Worldwide, we are using one million single-use plastic bags every minute; in America the average adult uses between 500 and 1,200 single-use plastic bags every year
- The average American uses more than 240 single use water bottles each year
- In America, we are using 500 million plastic straws every single day and most never get recycled
- Enough plastic is thrown away each year to circle the earth four times
- Plastics can take between 400 to 1000 years to decompose
- 8.8 million tons of plastic winds up in the ocean every year
- One million sea birds and 100,000 marine mammals are killed annually from plastic in our oceans


REDUCE
REUSE
RECYCLE
Happ
Learning

Plastic Egg Tray Pendants/Suncatchers

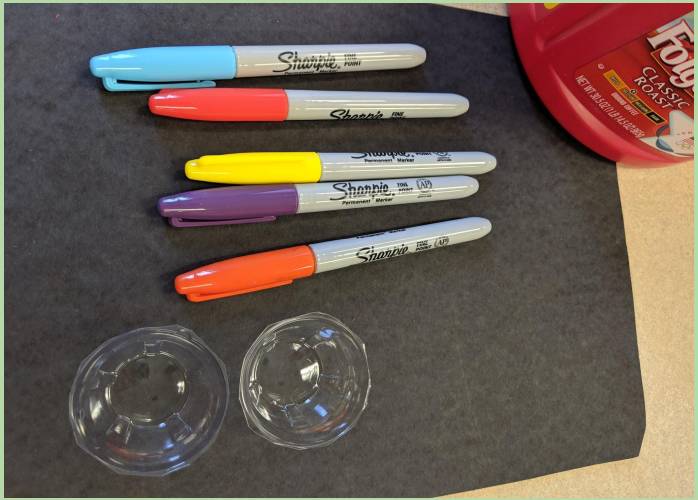
Supplies

- Plastic egg container cups
- Sharpies
- Hole puncher
- Parchment paper
- Baking tray
- Oven or toaster oven, preheated to 300°
- Twine
- Beads



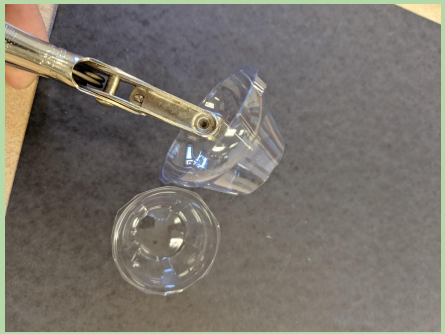
Directions

Grab a couple of plastic egg container cups and markers in your favorite colors. Use the markers to color the cups in any design you want. Add rainbows, hearts, stars, flowers, or even try to draw the Earth.



Tip: Use the flat side of the marker, not the tip to apply more even color. You want to fill in as much of the clear space as possible.

Using the paper punch, make a hole in the egg cup. This can be done before or after you have colored your design.



Note: It is important to make the hole before the cup goes into the oven so the cup doesn’t break.

Now place your cups on a baking tray lined with parchment. Have an adult pop them in the 300° oven for 2-3 minutes.

Make sure to watch the heating process. It’s neat to see the egg cups curl up and then flatten down again!

Carefully remove the tray from the oven and set aside to cool.

Then attach twine and beads to create your pendant or suncatcher.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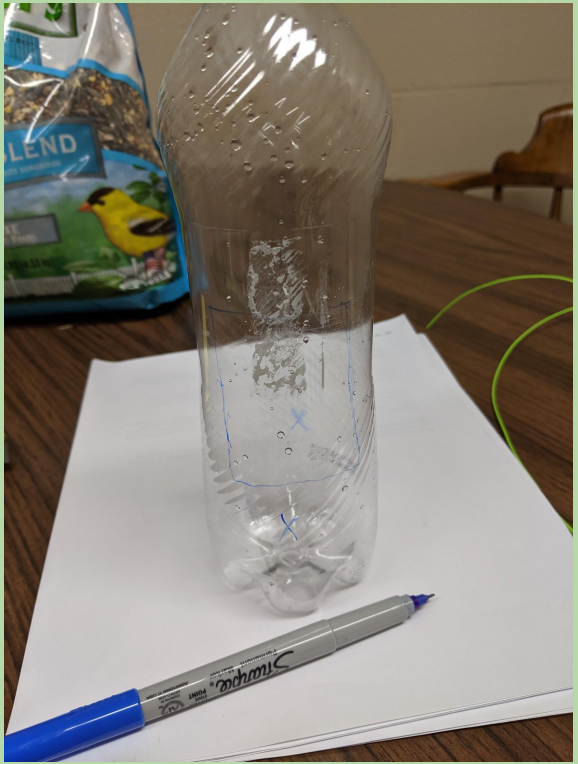
Plastic Bottle Bird Feeders

Supplies

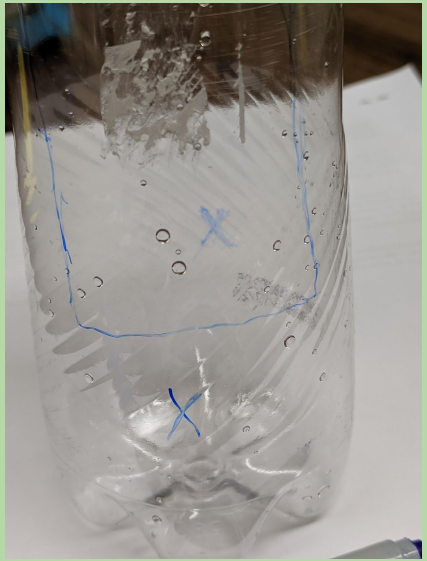
- Plastic drink bottle
- Sharpie
- Box cutter or X-acto knife (an adult will help you with this)
- Scissors
- Wooden dowel
- Wire
- Beads
- Bird seed

Directions

If your bottle has a label, remove it. There may be a sticky patch on the bottle where the label was. This is where we will cut the bird feeder opening.



With a sharpie, mark an X about 1 ½” from the bottom of the bottle. Above the X, draw an opening large enough for small birds to get in, but not low enough for the seeds to fall out. On the other side of the bottle, directly across from the X, mark another X.



At the top of the bottle near the cap, mark an X on one side and another X directly across from it on the other side.

A T T E N T I O N ! ! !

THIS PART IS VERY IMPORTANT!!!

Once you have your opening and Xs drawn, bring your bottle to an adult to make beginning cuts with a sharp blade.

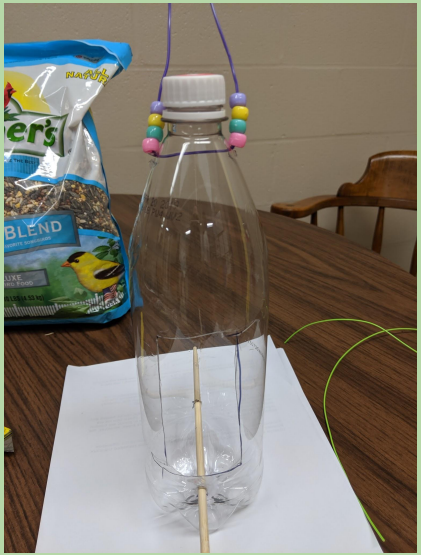
You will then finish cutting the opening with scissors.

PLEASE DO NOT TOUCH THE SHARP KNIVES!!!

Push a dowel through the bottom Xs.

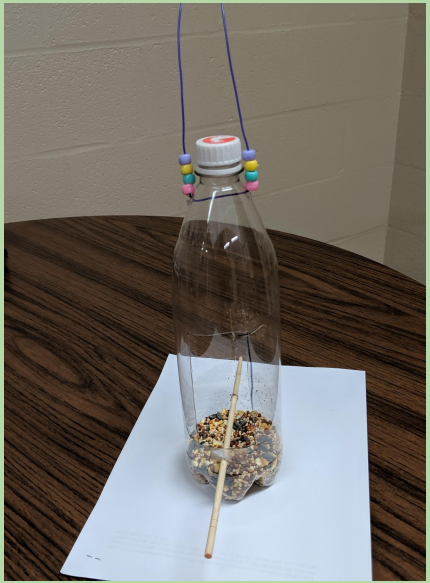
Push a piece of wire through the top Xs.

Add colorful beads to the wire on each side, then twist the wire closed at the top.



Fill the bird feeder with ½ cup bird seed through the large hole.

Take your bird feeder home, hang it in your yard, and enjoy watching the birds eat from your feeder!

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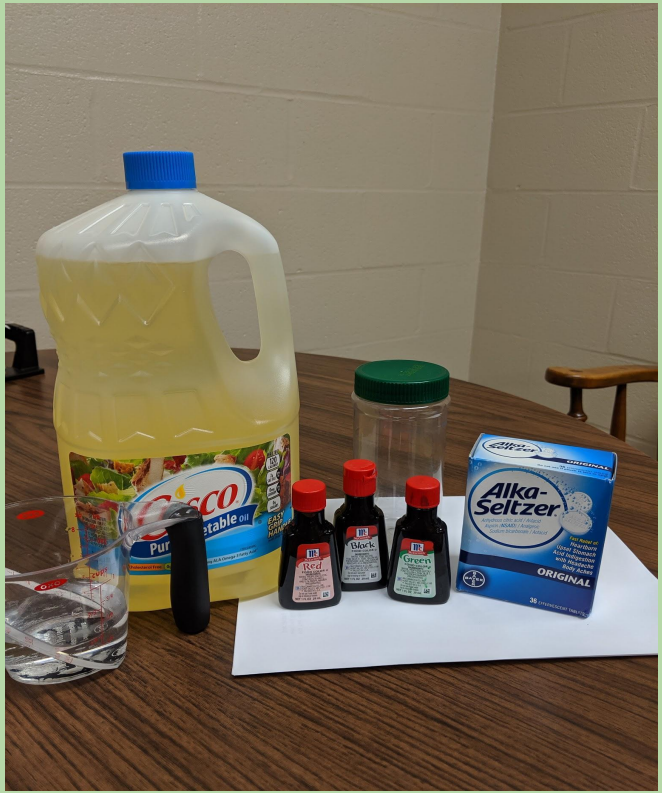
Glass Jar Lava Lamps

Supplies

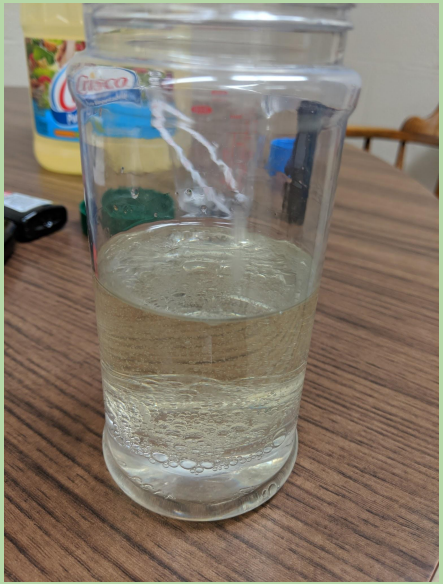
- Glass or plastic jar
- Cooking oil
- Water
- Food coloring
- Alka Seltzer Tablets



Directions

Measure and add ⅔ cup of cooking oil to your jar. Then measure and add ⅓ cup of water.

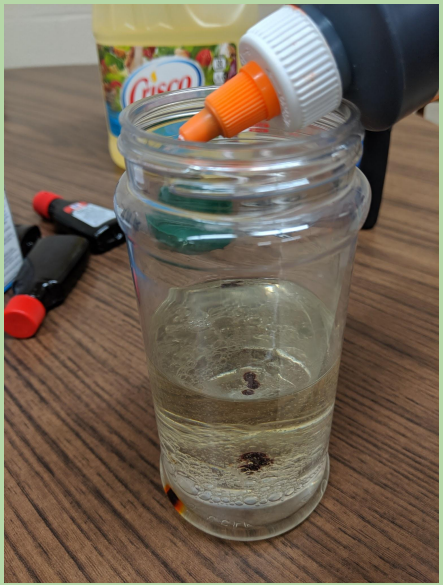
Make sure to watch what happens to the oil and water in jar as you add them.



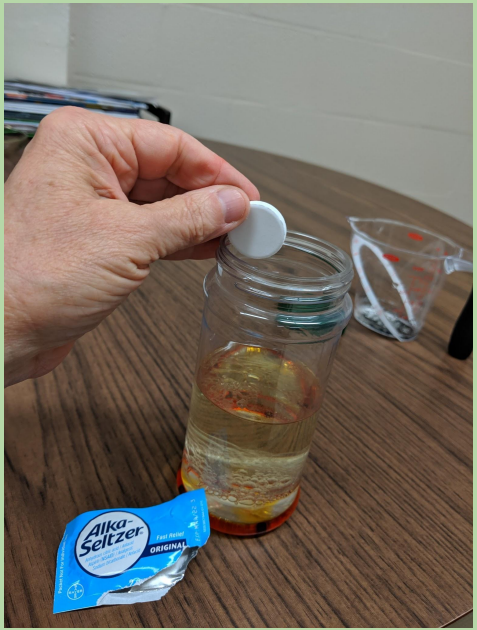
Next, carefully add 3-4 drops of food coloring to the mixture.

Do not stir or mix the color into the liquids.

What happens to drops?



Now, drop in 1 Alka Seltzer tablet.



Watch closely as your mixture becomes a lava lamp!

The Science Behind It

Physics

We have added three liquids (water, cooking oil, food coloring) to the jar. Each of these liquids has a different viscosity, or thickness.

- **Did the oil pour differently than the water?**
- **What did you notice about the drops of food coloring that you added to the oil/water?**
- **Why didn’t the liquids simply mix together?**

Liquids are made up of different numbers of atoms and molecules. In some liquids, these atoms and molecules are packed together more tightly resulting in a denser or heavier liquid.

The water is heavier than the oil, so it settled at the bottom of the jar. The food coloring is water-based so it also sank to the bottom.

The Science Behind It

Chemistry

When the water and the Alka Seltzer combine, they create a gas called carbon dioxide (which is all the bubbling that you see). The gas bubbles pick up the drops of color and carry the color water to the top of the oil where they pop and the water falls back down.

The chemical reaction will pick up speed and will continue for a few minutes. When the bubbling stops, you can add another tablet to continue the fun!